REMARKS

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks.

Status of Claims

Claims 1-7, 9-31, 33-45, 47-54 and 56-75 are currently pending in the application of which claims 1, 29, 45 and 52 are independent. Claims 1-45 and 47-75 were rejected.

Claim 46 was previously canceled. Claims 8, 32 and 55 have been canceled herein without prejudice or disclaiming the subject matter therein.

Claims 1, 7, 9, 29, 33, 35, 39, 45, 52 and 63 have been amended. No new matter has been introduced by way of the amendments above. Entry thereof is therefore respectfully requested.

Summary of the Office Action

Claim 52 has been objected to for an informality.

Claims 1-45 and 47-75 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Yang et al. (U.S. 2002/0041566), hereinafter "Yang").

The aforementioned rejections are respectfully traversed for at least the reasons set forth below.

Drawings

The Office Action did not indicate whether the formal drawings filed with the application are accepted. Indication of acceptance of the drawings is requested.

Claim Objections

Claim 52 has been objected to for an informality. More specifically, claim 52 is objected to for a typographical error. In light of the amendment to claim 52, it is respectfully submitted that this objection has been overcome.

Improper Rejection

The Examiner rejected claims 1-45 and 47-75 by citing generally to various sections in Yang to allege disclosure of the claimed features in three short paragraphs. The Examiner has provided no clear indication as to what or how the elements in Yang anticipate the claimed features. In effect, the Examiner expected the undersigned to venture guesses and speculate on the Examiner's inner thoughts as to which elements in Yang would have anticipated the allegedly-corresponding claimed features. Applicants are denied the otherwise rightful opportunity to effectively respond to the rejection prior to the finality of such a rejection. The Examiner is requested to identify, for each claimed feature, what specific features of the prior art are being relied upon as an allegedly teaching of that claim feature.

Nevertheless, it is clear from a review of Yang that it does not anticipate each and every elements of the claimed invention, as further elaborated below.

Claim Rejection Under 35 U.S.C. § 102

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. § 102, is whether the reference discloses all the elements of the claimed

combination, or the mechanical equivalents thereof functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals for the Federal Circuit in *Lindemann Maschinenfabrick GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. § 102, the Court stated:

> Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

Therefore, if the cited reference does not disclose each and every element of the claimed invention, then the cited reference fails to anticipate the claimed invention and, thus, the claimed invention is distinguishable over the cited reference.

- **Claims 1-45 and 47-75**

Claims 1-45 and 47-75 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Yang. This rejection is respectfully traversed.

  - *Independent claim 1*

Independent claim 1 recites, as amended,

> measuring, in real-time, interference metrics associated with links between a wireless communication node and a plurality of client nodes, wherein said measuring interference metrics includes determining a probability density function indicating interference plus noise during a fraction of time; and
>
> real-time scheduling, based on said interference metrics, communications between said wireless communication node and said plurality of client nodes to reduce service level variability among said plurality of client nodes;
>
> wherein the wireless communication node performs the real-time scheduling on behalf of the client nodes, and wherein wireless communications between a pair of client nodes transit through the communication node.

The Examiner generally asserts that [0032] of Yang discloses the above-mentioned features. However, Yang simply discusses adjusting service rates for mobile stations during connection setup according to their QoS requirements and interference levels. *Yang*, [0032]. However, Yang does not disclose measuring, in real-time, interference metrics associated with links between a wireless communication node and a plurality of client nodes, wherein said measuring interference metrics includes determining a probability density function indicating interference plus noise during a fraction of time. Instead, Yang discloses an interference monitor is responsible for noting when an interference area has changed. *Yang*, [0042]. Thus, the interference monitor determines if the mobile system is located in a high-interference area or a low-interference area. *Yang*, [0045]. In Yang, therefore, there is no *measuring, in real-time, interference metrics associated with links between a wireless communication node and a plurality of client nodes.*

Even assuming, *arguendo*, that Yang teaches measuring, in real-time, interference metrics associated with links between a wireless communication node and a plurality of client node, which Applicant does not concede, Yang still fails to teach wherein said measuring interference metrics includes determining a probability density function indicating interference plus noise during a fraction of time. As stated above, Yang discloses an interference monitor is responsible for noting when an interference area has changed. *Yang*, [0042]. There is simply no disclosure in Yang of determining a probability density function indicating interference plus noise during a fraction of time.

Moreover, if interference metrics associated with links between a wireless communication node and a plurality of client nodes are not measured in Yang, Yang also cannot disclose "real-time scheduling, based on said interference metrics, communications

between said wireless communication node and said plurality of client nodes to reduce service level variability among said plurality of client nodes; wherein the wireless communication node performs the real-time scheduling on behalf of the client nodes, and wherein wireless communications between a pair of client nodes transit through the communication node". There is no discussion that wireless communication occurs between a pair of nodes through a communication node and that the real-time scheduling is based on interference metrics.

At least for the foregoing reasons, Yang fails to at least disclose the above-mentioned features, as claimed in independent claim 1.

Accordingly, Yang fails to teach all the features of claim 1. The Examiner is thus respectfully requested to withdraw the rejection of independent claim 1 and the claims that depend therefrom and to allow all of these claims.

- *Independent claim 29*

Independent claim 29 recites, as amended,

> obtaining interference metrics for a plurality of wireless communication links, wherein said obtaining interference metrics includes determining a probability density function indicating interference plus noise during a fraction of time;
>
> real-time scheduling downlink communications via ones of said plurality of wireless communication links using said interference metrics to provide high bandwidth throughput while reducing service level variability among said plurality of wireless communication links; and
>
> real-time scheduling uplink communications via ones of said plurality of wireless communication links using said interference metrics to provide a high level of reliability with respect to uplinks of said plurality of wireless communication links;
>
> wherein the real-time scheduling of downlink communications and uplink communications is performed by a

> wireless communication node through which communications over the wireless communication links transit.

Thus, claim 29 recites certain features similar to those recited in claim 1 above. Therefore, claim 29 is believed to be allowable over the cited documents of record for at least the same reasons set forth above with respect to claim 1.

- *Independent claim 45*

Independent claim 45 recites, as amended,

> a memory storing interference metrics associated with a plurality of communication links of said communication system, wherein said interference metrics are determined from a probability density function indicating interference plus noise during a fraction of time; and
>
> a real-time scheduler in communication with said memory and applying a real-time scheduling algorithm to said interference metrics to real-time schedule communications via ones of said plurality of communication links to minimize variance of communication service levels associated with said plurality of communication links.

Thus, claim 45 recites certain features similar to those recited in claim 1 above. Therefore, claim 45 is believed to be allowable over the cited documents of record for at least the same reasons set forth above with respect to claim 1.

- *Independent claim 52*

Independent claim 52 recites, as amended,

> providing a plurality of channels for use in each of a plurality of service area portions;
>
> determining link quality metrics with respect to links between a wireless communication node and a plurality of client nodes, wherein said determining link quality metrics

> includes determining a probability density function indicating interference plus noise during a fraction of time; and
>
> real-time scheduling communications, by the wireless communication node, between ones of said client nodes and said wireless communication node such that a first client node having acceptable link quality metrics with respect to a first channel of said plurality of channels experiencing high levels of interference is scheduled to use said first channel while a client node having poor link quality metrics with respect to each said channel of a service area portion is scheduled to use a second channel of said plurality of channels experiencing lower levels of interference than said first channel.

Thus, claim 52 recites certain features similar to those recited in claim 1 above. Therefore, claim 52 is believed to be allowable over the cited documents of record for at least the same reasons set forth above with respect to claim 1.

- *Dependent claims 2-28, 30-44, 47-51 and 53-75*

As discussed above, the Examiner clearly failed to apply the aforementioned test for anticipation under 35 U.S.C. § 102 because the Examiner failed to meet the burden of properly identifying those elements in Yang that allegedly anticipate the claimed features. The Examiner did not provide any support for rejecting dependent claims 2-28, 30-44, 47-51 and 53-75 except by citing generally to various sections in Yang to allege disclosure of the claimed features. Thus, the Examiner provided no clear indication as to what or how the elements in Yang anticipate the claimed features. Thus, the Examiner's rejection of claims 2-28, 30-44, 47-51 and 53-75 is improper.

Moreover, claims 2-28, 30-44, 47-51 and 53-75 are dependent from one of independent claims 1, 29, 45 and 52. Thus, it is also believed to be allowable over the cited

documents of record for at least the same reasons as set forth to independent claims 1, 29, 45 and 52 above.

In view of the foregoing, it is therefore respectfully requested that the rejection of claims 2-28, 30-44, 47-51 and 53-75 be withdrawn, and these dependent claims be allowed.

Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited. Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to Deposit Account No. 08-2025.

Respectfully submitted,

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